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A NEW GENUS AND SPECIES OF GLOSSOPHAGINE BAT FROM COLIMA, MEXICO

By

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During the course of field work in the State of Colima, western México, in August, 1958, three adult male long-nosed bats resembling *Choeronycteris mexicana* Tschudi were taken by Schaldach near Pueblo Juárez. Subsequent collections by A. L. Gardner in August and September, 1959, yielded ten more specimens of this bat. Close examination has shown these specimens to belong to a heretofore unknown genus and species, which may be described as follows:

SUBFAMILY GLOSSOPHAGINAE

Musonycteris gen. nov.[3]

Genotype: *Musonycteris harrisoni* sp. nov.

General characters: Allied with *Choeronycteris*, which it resembles superficially, but with distinct cranial characters.

Diagnosis: Skull among the longest for the subfamily due to great elongation of the rostrum; cheek teeth narrow and delicate in structure, with reduction of lingual elements; nasals elevated dorsally; hamular processes of pterygoids enlarged, extending onto ventral surface of auditory bullae to level of anterior margin of meatus; basioccipital and basisphenoid produced into high, thin median ventral crest; teeth widely separated, the space between p^2 and p^3 approximately length of p^2.

Dental formula:

$$\frac{2}{0} - \frac{1}{1} - \frac{2}{3} - \frac{3}{3} - \times 2 = 30$$

Comparisons: The rostrum of *Musonycteris* represents more than one-half the total length of the skull, and is longer than that of any other

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[3] Derived from the generic names of the banana (*Musa*) and a bat (*Nycteris*).

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genus of glossophagine bat save the South American genus *Platalina*. *Platalina*, however, is a larger bat (Sanborn, Zool. Ser. Field MNH, vol. 24, no. 25, Jan. 6, 1943) and is further distinguished from *Musonycteris* by having two lower incisor teeth. *Musonycteris* is apparently most closely related to *Choeronycteris* as indicated by size, general appearance, general skull structure, and structure of the wing skeletal elements. It differs from that genus, however, as follows (see figs. 1-3 and table 1): longer rostrum, representing more than 50% of the total length of the skull as contrasted with approximately 40% in *Choeronycteris;* greater elevation of the dorsal surface of the nasals, which are almost flat in *Choeronycteris;* more delicate structure of the teeth; wider diastemae between the teeth; a high, thin crest on the mid-ventral line of the basioccipial and basisphenoid rather than a low rounded crest; more greatly elongate and inflated hamular processes which extend posteriorly to a line connecting the

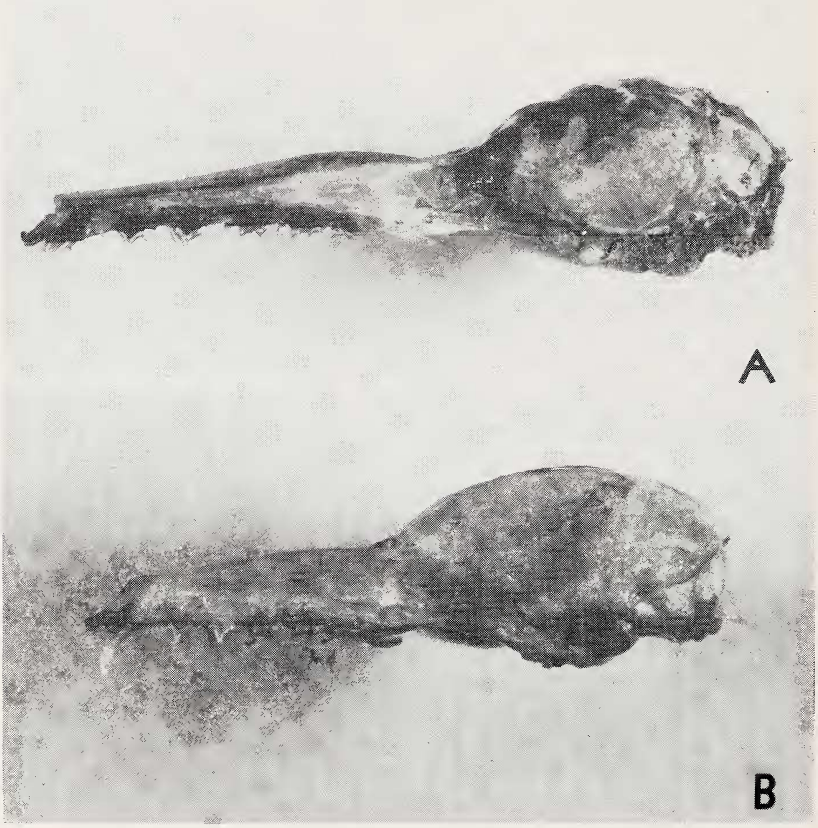

Fig. 1. Lateral view of the skulls, × 3: A. *Musonycteris harrisoni*, adult male, holotype, LACM No. 11480. B. *Choeronycteris mexicana*, adult male, LACM No. 9971 from Mitla, Oaxaca, Mexico.

anterior margins of the meati, rather than merely touching the bullae; lack of a mid-ventral, posterior continuation of the internasal septum as a low ridge on the roof of the interpterygoid fossa as found in *Choeronycteris*; anteriorly "V"-shaped rather than "U"-shaped interpterygoid fossa.

Musonycteris harrisoni sp. nov.[4]

TYPE: Los Angeles County Museum No. 11480, adult male, skin with skull, collected by A. L. Gardner (orig. no. 245) from 2 km. southeast of Pueblo Juárez (formerly Hacienda La Magdalena), Colima, México, Sept. 5, 1959. Measurements of type: total length, 85 mm.; tail length, 9 mm.; hind foot length, 10 mm.; ear from notch, 18 mm.; tragus, 9 mm.; forearm length, 42.9 mm.; greatest length of skull, 35.2 mm.; length of maxillary tooth row, 14.1 mm.; dorsal length of rostrum (anterior midline of nasals to line connecting supraorbital foramina), 18.3 mm.

RANGE: So far as known, only from the type locality and one adjacent area (see table 1).

DIAGNOSIS: Same as for genus.

DESCRIPTION: Color: Posterior dorsal region between Mummy Brown[5] and Clove Brown, lightening on middle back and shoulder region toward brownish light drab; bases of hairs between Avellaneous and white; underparts like shoulder region. Size (average of 11 adult males from the type locality): total length (10 individuals), 85.2 mm.; tail length, 9.7 mm.; hind foot length, 10.5 mm.; ear length, 16.6 mm.; tragus length 5.6 mm.; forearm length, 42.29 mm.; greatest length of skull, 34.46 mm.; maxillary tooth row, 13.36 mm.; interorbital breadth, 3.89 mm.; mastoidal breadth, 9.71 mm.; palatal length, 22.71 mm.; dorsal length of rostrum, 17.52 mm.; percentage dorsal length of rostrum to greatest length of skull, 50.96 per cent; mandibular length, 25.80 mm. Skull: rostrum extremely long, averaging over one-half of the greatest length of the skull; nasals long and nearly parallel-sided, arched above the molars to form a prominent hump; cheek teeth delicately formed with much reduction of lingual elements; teeth well separated; interpterygoid space "V"-shaped anteriorly; internasal septum completely internal, without a ridge continuing posteriorly onto the roof of the interpterygoid fossa; hamuli enlarged, in close contact with the auditory bullae, with tips extending noticeably posterior to a line connecting the anterior margins of the auditory meati; basioccipital and basisphenoid produced into a high, thin median ventral crest; lower jaw elongate with teeth well separated; lower incisors absent.

COMPARISONS: Same as for genus.

REMARKS: All the specimens of *Musonycteris* were caught in nylon "mist" nets set across a small irrigation ditch that runs through a banana

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[4] Named in honor of Ed N. Harrison, in recognition of his interest in, and generous support of Schaldach's field work.

[5] Names of colors are capitalized when direct comparison has been made with Ridgway's "Color Standards and Color Nomenclature," 1912.

TABLE 1

Measurements of *Musonycteris harrisoni* and *Choeronycteris mexicana*

Taxon and Locality	Sex	Total Length	Tail Length	Greatest Length of Skull	Maxillary tooth row Length	Interorbital Breadth	Mastoidal Breadth	Palatal Length	Dorsal Rostral Length	Mandible Length	Percentage Rostral Length/Greatest Length of Skull	Forearm Length
Musonycteris harrisoni Pueblo Juárez, Colima, Mexico												
LACM 11480 (Holotype)	M	85	9	35.2	14.1	3.7	9.6	23.6	18.3	26.3	52.0	42.9
LACM 11043 (Paratype)	M	80	8	34.7	13.0	4.0	9.7	22.9	17.7	26.6	51.0	42.0
LACM 11044 (Paratype)	M	81	11	34.0	13.3	3.7	10.0	22.8	17.2	25.5	50.7	42.3
LACM 11045 (Paratype)	M	82	9	34.8	13.5	4.1	10.0	22.7	17.6	26.2	50.6	42.0
LACM 11481 (Paratype)	M	88	10	34.5	13.2	4.1	9.6	22.7	17.6	26.0	51.1	42.6
LACM 11482 (Paratype)	M	87	10	34.4	13.7	3.8	9.7	22.6	17.7	25.7	51.5	41.8
LACM 11483 (Paratype)	M	89	10	34.2	13.3	3.8	9.6	22.3	17.6	25.0	51.5	42.8
LACM 11484 (Paratype)	M	89	10	34.0	13.1	3.9	9.4	22.5	17.5	25.6	51.5	42.2
LACM 11485 (Paratype)	M	84	9	34.4	13.3	4.1	9.9	22.6	17.2	25.5	50.0	41.8

LACM 11486 (Paratype)	M	-	12	34.2	13.1	3.7	9.4	22.2	17.3	25.3	50.7	42.5
LACM 11487 (Paratype)	F	81	11	32.1	12.5	3.6	9.4	20.9	16.0	23.5	49.9	42.0
LACM 11488 (Paratype)	F	85	9	32.0	12.0	4.1	9.5	20.8	15.8	23.9	49.4	41.6
4 kms. so. of Cerro de Ortega Colima, Mexico												
LACM 11489 (Paratype)	M	87	9	34.6	13.3	3.9	9.9	22.9	17.3	26.4	50.0	42.3
Choeronycteris mexicana												
Cochise County, Ariz.	M	93	13	29.9	11.2	3.5	10.1	18.1	12.2	21.4	40.8	44.2
Cochise County, Ariz.	F	90	12	30.0	11.1	3.9	10.2	18.4	12.3	21.5	41.0	46.1
Cochise County, Ariz.	F	90	11	30.0	11.3	3.8	10.0	18.2	12.7	21.4	42.3	45.8
Cochise County, Ariz.	F	83	7	29.3	11.2	3.9	9.8	18.0	12.4	21.1	42.3	45.0
Pima County, Ariz.	F	78	8	-	11.1	3.8	-	18.5	12.6	21.3	-	44.0
Pima County, Ariz.	F	80	11	30.4	11.8	3.8	10.1	18.7	11.7	22.0	38.5	46.2
Pima County, Ariz.	F	78	9	29.8	11.0	4.1	10.1	18.1	12.1	20.9	40.5	45.0
Santa Cruz County, Ariz.	M	73	8	30.1	11.5	4.2	10.1	18.5	12.6	21.7	41.6	46.7
Sonora, Mexico	F	95	11	29.8	11.8	4.1	10.1	18.0	12.2	21.0	41.0	45.6
Oaxaca, Mexico	M	81	11	31.1	11.5	4.1	11.0	19.3	12.3	23.1	39.6	45.6
Oaxaca, Mexico	M	82	11	30.3	10.9	3.9	10.4	17.8	11.7	21.5	38.6	44.4
Oaxaca, Mexico	M	77	12	30.3	11.4	4.0	10.1	17.7	12.1	21.9	39.8	43.4
Oaxaca, Mexico	M	79	11	30.2	11.6	4.1	10.5	18.4	11.7	22.1	38.7	44.6
Oaxaca, Mexico	F	84	11	29.0	10.9	4.0	9.8	17.6	11.5	20.9	39.7	42.0

grove. This grove lies about 2 kilometers to the southeast of Pueblo Juárez, Colima, Mexico. The grove is situated in Arid Thorn Forest, but is adjoined closely by an extensive stand of climax Tropical Deciduous Forest. A large, open corn field, or *milpa*, forms one edge of the grove. The banana trees in the grove were in flower at the time that the first three specimens were collected by Schaldach (August, 1958), and it is assumed that these bats were feeding on the nectar of these flowers.

The net wherein the first three specimens were caught was set at right angles to the stream flow through the thickest patch of banana trees. Other nets (5 in all) were set the same and subsequent nights, both upstream and downstream from this site, but they took only *Glossophaga soricina leachii* and *Artibeus j. jamaicensis*. Five *Glossophaga* and seven *Artibeus* were also taken in the same net with the new bat. The *Musonyc-*

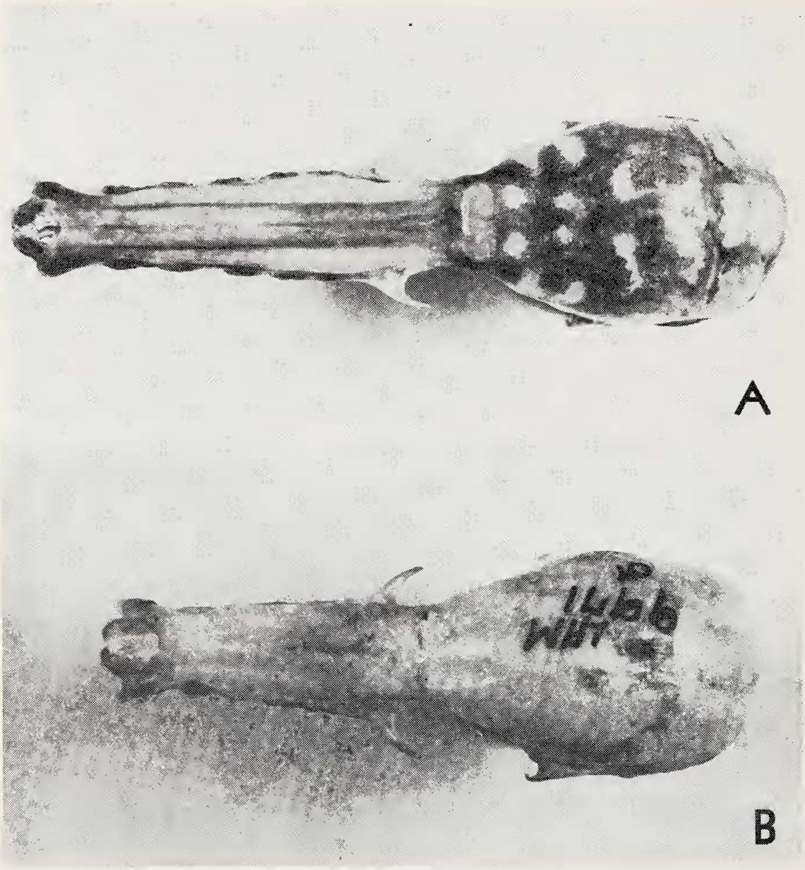

Fig. 2. Dorsal view of the skulls, × 3: A. *Musonycteris harrisoni*, adult male, holotype, LACM No. 11480. B. *Choeronycteris mexicana*, adult male, LACM No. 9971, from Mitla, Oaxaca, Mexico.

teris were entangled quite high in the net, about five feet above the ground. All were taken about 10 p.m.

During the process of preparation of these specimens, the extremely long tongue of these animals was noted. The tongue of one of the animals measured 76 mm. from the gape of the jaws to the outstretched tip (held by a pair of forceps). The total length of the bat itself measured only 80 mm. One of Schaldach's Mexican assistants immediately applied the name "*murcielago trompudo*" to these bats. The authors think, however, that this was a newly coined name to describe the trumpet-shaped snout of the animal, rather than a previously accepted vernacular name.

For the loan of comparative material of *Choeronycteris* we are indebted to Dr. E. Lendell Cockrum of the University of Arizona (U.A.). Grateful acknowledgment is also made to Ing. Juan Lozano Franco, of the Dirección General Forestal y de Caza, México, D.F., under whose kind

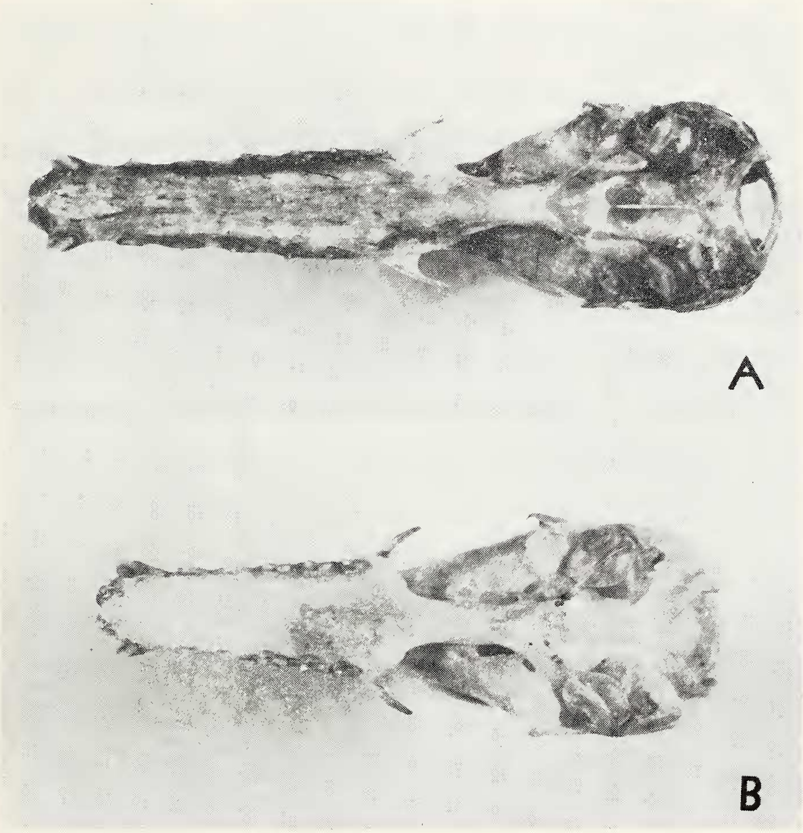

Fig. 3. Ventral view of the skulls, × 3: A. *Musonycteris harrisoni*, adult male, holotype, LACM No. 11480. B. *Choeronycteris mexicana*, adult male, LACM No. 9971, from Mitla, Oaxaca, Mexico.

auspices our federal collecting permit was obtained. All specimens without designation are in the collection of the Los Angeles County Museum.

SPECIMENS EXAMINED: Thirteen *Musonycteris harrisoni* from Colima: type locality, 12; 4 kms. so. of Cerro de Ortega, 1. Sixteen *Choeronycteris mexicana* from the following localities: Arizona, Cochise County, 1 mi. north of Paradise, 3 (U.A.); South Fork Cave Creek, 1 (U.A.); Pima County, vicinity of Tucson, 4 (U.A.); Santa Cruz County, 5 mi. north, 2 mi. west of Patagonia, 1 (U.A.); México, Sinaloa, 6 mi. east of Santa Lucia, 1; Sonora, 11 mi. by road northeast of Imuris, 1 (U.A.); Oaxaca, 6 mi. west of Mitla, 5.

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